

DETAILED ACTION

This is to acknowledge the receipt of "amendment after final" and "argument/remarks" filed on 2/25/2010. Claim 1 has been amended; claims 7, 8, and 12 are cancelled; and claims 1-6 and 9-11 are pending in application. Claims 1 and 3 are independent claims

Information Disclosure Statement

The document listed in the IDS marked 1/25.2010 has been crossed out since it is the present application.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Robert T. Pous on 03/01/2010. The application has been amended as follows:

Claim 3. (Currently amended) An Ag sputtering target, wherein the Ag sputtering target has three-dimensional fluctuation of X-ray diffraction peak intensity ratio (X_2/X_1) not more than 35%; and

wherein the three-dimensional fluctuation of X-ray diffraction peak intensity ratio (X_2/X_1) is measured by:

exposing a plurality of layers having sputtering surfaces by slicing the Ag sputtering target in planes parallel to a sputtering starting surface;
selecting a plurality of location on each of the exposed sputtering surfaces of the layers;

measuring the X-ray diffraction peak intensities of the Ag at all the selected locations of all the exposed sputtering surfaces of the layers;

calculating the X-ray diffraction peak intensity ratio (X_2/X_1) for each of the selected location, the X-ray diffraction peak intensity ratio (X_2/X_1) being defined as the ratio of the largest Ag X-ray diffraction peak intensity X_1 in relation to the second largest Ag X-ray diffraction peak intensity X_2 ;

calculating values A2 and B2 using the formula below and based on the X-ray diffraction peak intensity ratios (X_2/X_1) at all the selected locations of all the exposed sputtering surfaces of the layers,

$$A2 = (R_{\max} - R_{\text{ave}}) / R_{\text{ave}} \cdot 100\%$$

$$B2 = (R_{\text{ave}} - R_{\min}) / R_{\text{ave}} \cdot 100\%$$

wherein

R_{\max} : maximum value among the X-ray diffraction peak intensity ratios (X_2/X_1) at all selected locations

R_{\min} : minimum value among the X-ray diffraction peak intensity ratios (X_2/X_1) at all selected locations

R_{ave} : average value among the X-ray diffraction peak intensity ratios (X_2/X_1) at all selected locations; and

selecting the large one of the values A2 and B2 as the three-dimensional fluctuation of the X-ray diffraction peak intensity ratio (X_2/X_1).

Status of the Previous Rejections

The previous rejection of claims 1-4 and 9 under 35 U.S.C. 102(b) as anticipated by Segal (US 6,238,494 B1, thereafter, US'494) is withdrawn in view of the applicant's amendment and remarks filed 2/25/2010.

The previous rejection of claims 5, 6, 10, and 11 under 35 U.S.C. 103 (a) over US'494 in view of Murata Hideo (JP 2003113433 A, thereafter, JP'433) is withdrawn in view of the applicant's amendment and remarks filed 2/25/2010.

The previous rejection of claims 1-6 and 9-11 on the ground of nonstatutory obviousness type double patenting as being unpatentable over claims 1-4 of copending application No.10/486913 (Refer to the previous office action marked 6/8/2009) is withdrawn in view of the applicant's amendment and remarks filed 2/25/2010.

Allowable Subject Matter

Claims 1-6 and 9-11 are allowed. The following is a statement of reasons for the indication of allowable subject matter:

The recorded prior art Segal (US'494) teaches a metal sputtering target with fine uniform structure and textures. However, Prior arts (US'494, or US'494 in view of JP'433, or claims 1-4 of copending application No.10/486913) do not specify the Ag target with three-dimensional fluctuation of grain sizes not more than 18% as defined in

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the instant claims 1 and 3, for example, obtaining three-dimensional fluctuation of grain sizes from comparing the different measurements from the surfaces of different sliced layers.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delay, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on statement of Reason for Allowance"

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jie Yang whose telephone number is 571-2701884. The examiner can normally be reached on IFP.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-2721244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JY

/Roy King/
Supervisory Patent Examiner, Art Unit 1793